

Clinical Images

Tophaceous gout of the spine masquerading as spondylodiscitis

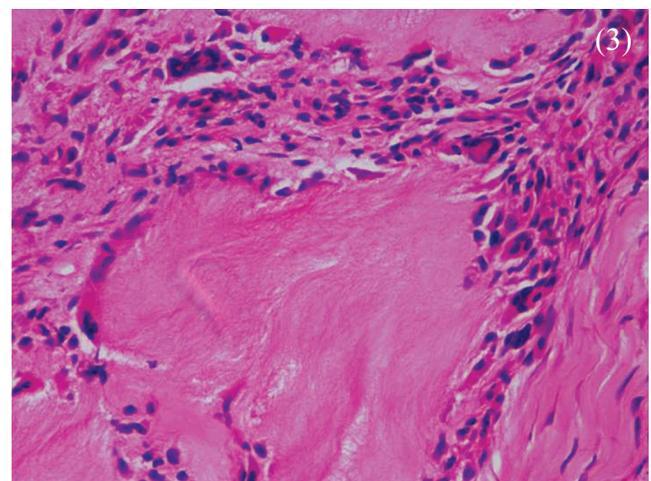
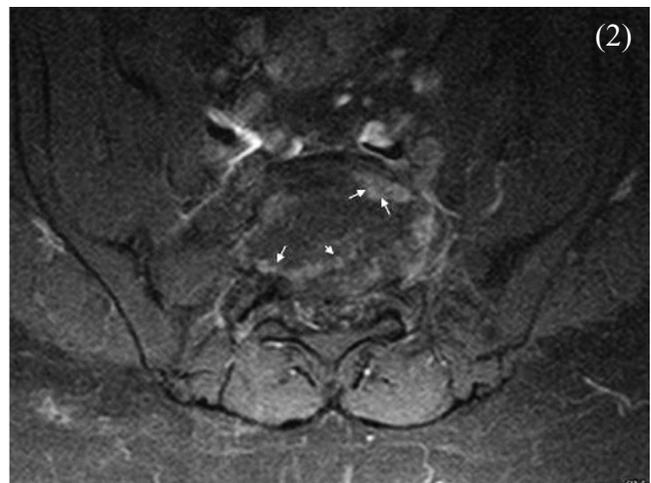


Fig. 1. T2W image showing hyperintense L5-S1 disc, **Fig. 2.** Axial MRI with contrast showing peripheral enhancement (white arrows), **Fig. 3.** Photomicrograph showing fibroblasts, lymphocytes and foreign body type of giant cells in tophaceous gout.

A 51-year old male presented to the spine unit, department of Orthopaedics of Amrita Institute of Medical Sciences, Cochin, India, with chronic back pain with difficulty in walking for the past six months. On evaluation, he had bilateral arthritis of the knees and right elbow. He had severe tenderness at the lumbosacral junction with severe pain on attempted spinal movement. Laboratory investigations showed

elevated ESR and C-reactive protein (CRP). MRI showed lytic destruction of antero inferior end plates of L5 vertebral body with retropulsion of L5 vertebral body into the spinal canal causing significant compression of cauda equina and hyperintensity in the intervertebral disc space at L5-S1 level in T2 weighted sagittal image (Fig. 1). Post contrast MRI study showed peripheral enhancement of L5-S1 intervertebral

disc (Fig. 2). Therefore, he was diagnosed to have infectious spondylodiscitis at L5-S1 with cauda equina compression. He underwent posterior decompression and interbody fusion. Intraoperatively L5-S1 disc showed degeneration and was speckled with whitish chalky material. The histopathological examination of the disc material demonstrated fibroblasts, intense inflammatory infiltrate composed of lymphocytes and foreign body type of giant cells around a few long slender needle shaped crystals suggestive of tophaceous gout (Fig. 3). Post-operative serum uric acid was grossly elevated to 19.1 mg/dl. He was medically managed with allopurinol 300 mg/day with non-steroidal anti-inflammatory drugs (NSAIDS) to prevent flare up reaction following surgery. Retrospective evaluation revealed gouty tophi on the ears. The patient developed wound infection and *Escherichia coli* septicaemia during the postoperative period and expired one week later.

Spinal involvement in gout is rare. Monosodium urate crystals can deposit at ligamentum flavum, facets, epidural space, intradural compartment, discovertebral junction, lamina, pedicle and neural foramen¹. Gouty tophi can result in degenerative spondylosis, discovertebral erosions, bone destruction leading to

joint subluxation, spinal deformities, spontaneous fusion or pathological fractures. Patients could present with features of spinal stenosis, lumbar radiculopathy, spondylolisthesis, cauda equina syndrome or spinal infection². This patient had vertebral end plate erosions with retrolisthesis and features mimicking infection. In patients with history of hyperuricemia presenting with back pain or other spinal symptoms, tophaceous gout of the spine should be included as a differential diagnosis.

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References

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2. Kelly J, Lim C, Kamel M, Keohane C, O'Sullivan M. Tophaceous gout as a rare cause of spinal stenosis in the lumbar region. *J Neurosurg Spine* 2005; 2 : 215-7.